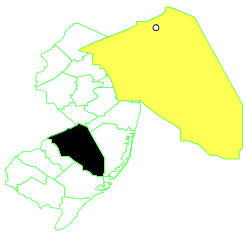
CINNAMINSON GROUND -WATER CONTAMINATION NEW JERSEY

EPA ID# NJD980785638



EPA REGION 2

CONGRESSIONAL DIST. 03

Burlington County

Cinnaminson Township

Other Names:
Cinnaminson Township Landfill
Sanitary Landfill

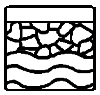
Site Description

The Cinnaminson Ground-Water Contamination site covers approximately 400 acres in Cinnaminson and Delran Townships in Burlington County, New Jersey. The site includes properties bounded by Union Landing Road, U.S. Route 130, River Road, and Taylors Lane. The Delaware River is located approximately 5,000 feet to the northwest, and U.S. Route 130 passes about 2,000 feet southwest of the site. The site consists of a landfill, residential properties, and light to heavy industrial properties. A number of the industrial facilities have petroleum underground storage tanks. Unlined slurry pits and cooling ponds are located on one industrial property. The landfill portion of the site originally began as a sand and gravel mining pit. During the late 1950s, municipal solid wastes were deposited in the completed unlined mining pits, while mining operations continued in other parts of the property, until the late 1960s. After the mines were closed, large amounts of refuse and solid waste were deposited in the pits. Municipal and institutional wastes, bulky wastes, vegetable and food processing wastes, and industrial wastes, including hazardous substances, were deposited in two areas of the landfill. In 1980, operations ceased. A clay cap was installed over the landfill to restrict rain and surface water from infiltrating into the wastes, thus reducing the amount of leachate entering the groundwater. The underlying aquifer is a source of drinking water for people living around the site. There are both public and private water supply wells within one mile of the site; however, the private wells are not being used for drinking water. Approximately 55,000 people live within a 3 mile radius of the site.

Site Responsibility: This site is being addressed through Federal and responsible party actions.

NPL LISTING HISTORY
Proposed Date: 10/01/84
Final Date: 06/01/86

Threats and Contaminants



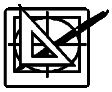
Arsenic and volatile organic compounds, including chloroform, benzene, tetrachloroethylene, and vinyl chloride, have been detected in the groundwater. Ingestion of contaminated groundwater poses the greatest potential risk to residents.

Cleanup Approach

Remediation of the site is being addressed in two stages, known as operable units. The first operable unit is directed at the cleanup of the ground-water contamination at the site. The second operable unit will address the effectiveness of the clay cap in reducing the generation of leachate.

Response Action Status

Remedial Investigation/Feasibility Study: EPA completed an investigation of the ground-water contamination at the site in 1989. The investigation included the installation of monitoring wells and sampling of the groundwater around the site to locate the areas of greatest contamination. The hydrogeology at the site is complicated by the presence of discontinuous clay layers, called "lenses", beneath the site. These clay lenses tend to create a shallow aquifer above the deep aquifer. Both the shallow and the deep aquifers were found to be contaminated. In 1990, EPA completed its feasibility study to develop and evaluate the alternatives for the remediation of ground-water contamination at the site.



Record of Decision: On September 28, 1990, EPA selected a remedy for the first operable unit, which includes pumping ground water from both the deep and shallow aquifers, treating it to remove the contamination, and reinjecting the treated ground water into the deep aquifer.

Remedial Design: Field work for the remedial design began in June 1993. The design of the ground-water remediation system for the deep aquifer was completed in August 1996. However, the potentially responsible party suggested modifications to the design to make it more efficient. The modifications along with the final design were approved in January 1999.

Remedial Action: Ground-water cleanup is currently ongoing. Construction of the ground-water remediation system began in summer 1999 and was completed in January 2000. The plant began operation in April 2000.

Clay Cap: An evaluation of the effectiveness of the clay cap will be performed after the ground-water remediation system is operational.

Remedial Action: Ground-water cleanup is ongoing. Construction of the ground-water remediation system began in summer 1999 and was completed in January 2000. The plant began operation in April 2000.

Site Facts: The design and implementation of the selected remedy is being undertaken by a potentially responsible party under a unilateral administrative order.

Cleanup Progress *(Threat Mitigated by Physical Clean-up Work)*

A groundwater pump and treat system was designed by a potentially responsible party at the site and approved by EPA in January 1999. Construction of the pump and treat system began in summer 1999 and was completed in January 2000. The plant began operation in April 2000. Between October 1, 2000 and September 30, 2001, over 67.7 million gallons of contaminated ground water was treated; approximately 8.3 tons of contaminants were removed.